

Appl. No. 10/604,973
Amdt. Dated January 19, 2005
Reply to Office action of October 28, 2004

REMARKS/ARGUMENTS

Examiner's Opinion:

5 Claims 1, 6-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Ohnishi et al. (US Pat. 6,525,932) and further in view of Lee et al. (US Pate.
6,728,115). Claims 2-5 are objected to as being dependent upon a rejected base
claim, but would be allowable if rewritten in dependent form including all of the
limitations of the base claim and any intervening claims.

10 Ohnishi et al. fail to disclose a central processing unit installed on the
motherboard for processing data and programs; a chipset installed on the
motherboard for communicating between the central processing unit and the
peripheral devices of the portable computer; and a memory installed on the
motherboard for storing data and programs. It would be obvious to one of ordinary
skill to modify a central processing unit, a chipset and a memory installed on the
15 motherboard of Lee et al. into Ohnishi et al.'s cassette in order to assist in routing
data between main memory and the system.

Applicant's Response:

20 The Ohnishi et al., Flannery et al., and Cheng references all relate to expanding
functionality of a portable computer through the accommodation of at least one of
variously described detachable expansion units comprising a peripheral device into
an expansion bay of the portable computer. Examples of such peripheral devices
include FDDs, Optical Disc Drives, second Hard Drive, Communication Devices,
etc. "effectively extending a desired function among a storage system, a
communication system, a printing system, an input system, and a security
25 system" (Ohnishi Col.5, lines 11-23). The Lee et al. reference, in Fig.4 and
Cols.3-5, discloses only an architectural block diagram of a common computer
system utilizing EMI/RFI shielding. Again, only the optical disc drive and FDD
are detachable.

Appl. No. 10/604,973
Amdt. Dated January 19, 2005
Reply to Office action of October 28, 2004

In all references, if the expansion units are detached from the portable computer, the basic portable computer continues to properly operate minus only the additional functionality provided by the expansion unit.

5 On the other hand, the stated application's problem concerns not expanded functionality of a portable computer, but rather the ability to readily update core hardware of a portable computer without requiring replacement of expensive items such as an LCD or extensive expertise and tools (Paragraphs [0006-7]). Such "core hardware" includes at least the CPU that controls operations of the
10 portable computer and may include chipsets, memory, and the like (Paragraph [00015]).

 Everyone familiar with the art is well aware of how quickly core hardware can become outdated in the current environment and requires replacement. The inventive and claimed step that solves the upgrade problem is moving the core
15 hardware normally found fixed within the portable computer chassis into a cassette that may be readily detached from the rest of the portable computer for replacement or repair when required. The claimed cassette itself IS the core hardware of the portable computer. Unlike with the expansion units of the cited references, if the present invention cassette is detached from the portable
20 computer, the portable computer of the present invention is unable to properly function because it is missing the CPU (which is in the detached cassette).

 The Examiner has stated that it would be obvious to combine the components on the motherboard disclosed by Lee et al. into Ohnishi et al.'s cassette "to assist in routing data between main memory and the system". While
25 it is agreed that Lee et al. disclose a conventional motherboard having conventional components install thereon, the Applicant is unable to find in the cited references any suggestion or motivation for such a combination. Affixed core hardware, such as CPU, and expendable peripheral devices are widely utilized in portable computers, but inability to upgrade key components has long
30 been a significant drawback of laptop computers. This fact further proves that the


Appl. No. 10/604,973
Amdt. Dated January 19, 2005
Reply to Office action of October 28, 2004

present invention is non-obvious to the computer industry.

5 In sum, none of the cited references, alone or in combination, suggests,
discloses, or offers a solution to this problem. None of the references, alone or in
combination, suggests or discloses disposing the portable computer's core
hardware within a detachable cassette. This physical structural difference
provides the benefit of ready upgradeability of core hardware components in a
portable computer and is claimed as such.

10 Therefore, the Applicant respectfully requests reconsideration and
allowance of claims 1, and 6-19 and acceptance and allowance of new claim 20.

15 Sincerely yours,



Date: January 19, 2005

Winston Hsu, Patent Agent No. 41,526

P.O. BOX 506, Merrifield, VA 22116, U.S.A.

20 Voice Mail: 302-729-1562

Facsimile: 806-498-6673

e-mail : winstonhsu@naipo.com

Note: Please leave a message in my voice mail if you need to talk to me. The time
25 difference between D.C. and Taiwan is 13 hours. The preferred time period for
telephone conversation is 7 AM (or earlier) – 11 AM, D.C. time.